DOCUMENT RESUME

ED 284 830 SP 028 904

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TITLE The Effects of a Behavioral Model of Supervision on the Supervisory Behaviors of Cooperating Teachers.
PUB DATE Apr 87
NOTE 45p.; Paper presented at the National Convention of the American Alliance for Health, Physical Education, Recreation and Dance (Las Vegas, NV, April 13-17, 1987).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Cooperating Teachers; Elementary Secondary Education; *Feedback; Higher Education; *Models; Physical Education Teachers; Preservice Teacher Education; *Program Effectiveness; Student Teachers; *Supervisory Training; *Teacher Supervision

ABSTRACT

The purpose of this study was to train cooperating teachers in a Behavioral Model of Supervision (BMS-PE). Four cooperating teachers in suburban school districts in central Ohio were trained using this model that emphasized communicating feedback with more details and holding teachers more accountable for their performances during post-teaching conferences through the supervision components of monitoring, conference, and follow-up monitoring. Findings clearly indicated that cooperating teachers can perform supervisory functions as a result of training in a BMS-PE. Specific results included: an increase in the amount of time spent by participants in micro-incident and planning incident categories, a decrease in the time spent by participants in unrelated incident and macro-incident categories, an increase in the communication of fully explicit tasks and type-3 accountability statements, and a decrease in the communication of implicit tasks and type-1 accountability statements. A six-page reference list is included. (Author/CB)

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The Effects of a Behavioral Model of Supervision on the Supervisory Behaviors of Cooperating Teachers.

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Running Header: Cooperating teacher training

This paper was presented at the American Alliance for Health, Physical Education, Recreation & Dance (AAHPERD) convention, Las Vegas, April 13-17, 1987.

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Introduction

The culminating field experience, typically labelled student teaching is considered the most important component in all teacher education programs by students and those involved with the training of teachers (Connant, 1963; Locke, 1979; Zeichner, 1980; Tabachnick, Popkewitz and Zeichner, 1978). Recognizing this importance, it behooves researchers and teacher educators to focus on this aspect of the training program and to attempt to understand "what is out there" in order to facilitate its improvement (Locke, 1979).

One way to initiate improvement in student teaching is to understand the nature of tasks and accountability as they operate in student teaching (Tinning 1983). The task and accountability notions appear to have potential generality across classrooms and physical education settings. For example, the notion of tasks and accountability were conceptualized by Doyle (1977b, 1978, 1979 and 1980) in classrooms, Tousignant (1982) in physical activity classes, and Tinning (1983) in student teaching. In addition, these notions have been empirically tested by Doyle (1977a, 1981) in classrooms, and Alexander (1982) in physical education classes. Realizing this potential generality, this study attempted to apply the concepts

of tasks and accountability to conference settings in student teaching.

Another concern of this study was that, if effective supervision and instructional improvement are the ultimate goals of supervision (Mosher and Purpel, 1972), then teacher training institutions should provide training for cooperating teachers so that they can support and facilitate the achievement of these goals (Taggart and Wilkinson, 1985; Hutslar, 1976; Cramer, 1977; Evans, 1976; Friebus, 1977; Karmos and Jacko, 1977; Yates, 1981; Lang, 1980; Cornish, 1979; Horton and Harvey, 1979). This study attempted to provide training for cooperating teachers in a behavioral approach to supervision so that they can provide effective supervision.

Method

Subjects

The subjects for the study included four cooperating teachers in suburban school districts in central Ohio. They were two secondary school teachers and two elementary school teachers. All four cooperating teachers had previous supervisory experience and have been regularly involved with student teaching placements at The Ohio State University for over three years. All the cooperating teachers were contacted prior to the assignment of student teachers by the university coordinator for student teaching. They all agreed to particpate in the study.

Two hours of graduate credit was earned by each cooperating teacher for participation.

Intervention

The purpose of the study was to train cooperating teachers to supervise student teachers in an effective manner. That is, by implementing a Behavioral Model of Supervision-Physical Education (BMS-PE) (see figure 1) which is compatible with the goals of the teacher education program. Such a supervisory approach requires cooperating teachers to gain a theoretical and practical understanding of the program goals, and to develop the skills necessary for implementing the BMS-PE.

To facilitate this training a Personalized System of Instruction (PSI) Keller (1968) approach was employed. The PSI materials were developed in a systematic way so that cooperating teachers using it would gradually develop supervisory skills that would approximate the terminal goal of becoming proficient in implementing the BMS-PE. A diagramatic representation of the BMS-PE process based on a task analysis of the supervisory process is shown in figure 1 below.

INSERT FIGURE 1

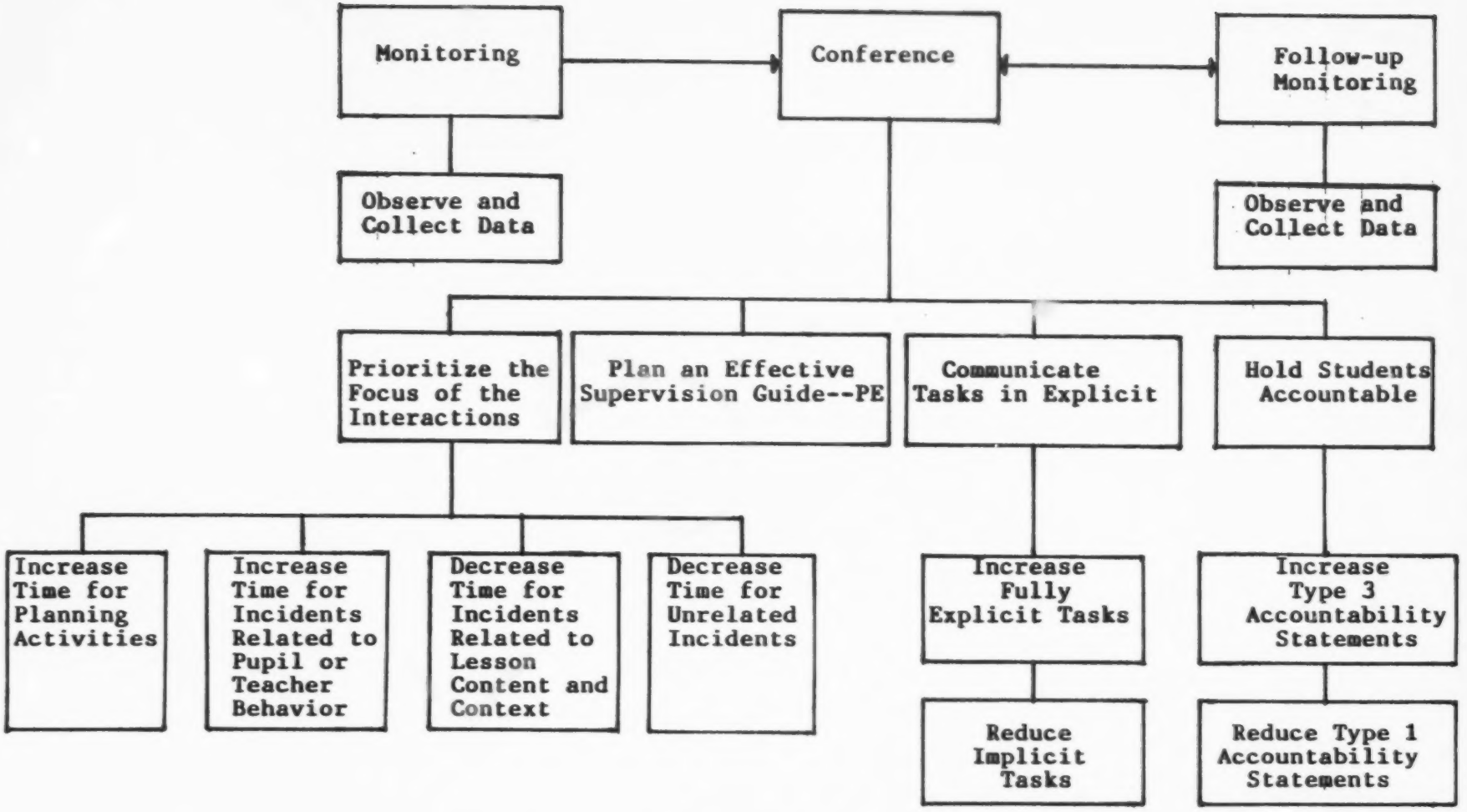
Monitoring
Conference
Follow-up Monitoring
Observe and Collect Data
Observe and Collect Data
Prioritize the Focus of the Interactions
Plan an Effective Supervision Guide--PE
Communicate Tasks in Explicit
Hold Students Accountable
Increase Time for Planning Activities
Increase Time for Incidents Related to Pupil or Teacher Behavior
Decrease Time for Incidents Related to Lesson Content and Context
Decrease Time for Unrelated Incidents
Increase Fully Explicit Tasks
Increase Type 3 Accountability Statements
Reduce Implicit Tasks
Reduce Type 1 Accountability Statements

Figure 1: Diagrammatic representation of the BMS-PE process based on a task analysis of the supervisory process.

The training module taught three distinct performance objectives. The three objectives include: Monitoring, Conferencing and Follow-up monitoring (see figure 1). For the first performance objective, cooperating teachers were trained to become proficient in the use of the Basic ALT-PE observation system developed by Wilkinson and Taggart (1984) at The Ohio State University. This component of the training process was designed to teach cooperating teachers a technique for observing and recording data. An 80% performance criterion for this component of the training process was deemed sufficient. If a cooperating teacher did not achieve 80% accuracy, this component was repeated until criterion was met.

For the second performance objective, cooperating teachers were trained to perform four sub-skills (see figure 1). The sub-skills included:

1) Prioritizing the focus of the interactions during conferences.
2) Discussing and specifying tasks in fully explicit manner during conferences.
3) Discussing performances and determining how the student teacher's performance relate to pre-specified goals (holding student teacher accountable).
4) Planning an Effective Supervision Guide (ESG-PE).

For the first sub-skill cooperating teachers were trained to spend a large percent of the conference time in:

i) planning incidents which involved discussions and suggestions of teaching strategies that can help the student teacher to remediate or maintain specific teacher or pupil behaviors,

ii) discussing incidents that relate to specific teacher or pupil behaviors,

iii) discussing incidents that relate to the context of the lesson itself, activities or drills.

In addition, cooperating teachers were trained to minimize the time spent in discussions that are unrelated to the observation data.

For the second sub-skill, cooperating teachers were trained to decrease the frequency of implicit task statements and to increase fully explicit task statements. In order to increase fully explicit tasks, cooperating teachers were trained to decrease specification of tasks that described performance only, and to increase specification of tasks in which all the components of explicitness are present. The components of explicitness are: situation, performance and criteria. For example: When a task is specified as "you have to reduce management time", it is considered implicit because it entailed only performance details "reduce management time". No criterion

for successful accomplishment of the task is provided. On the other hand, when the task is specified as "reduce management time to 10 percent during the next observation session", it is considered fully explicit. The performance is to "reduce management time", the criterion is "to 10 percent", and the situation is "during the next observation session".

For the third sub-skill cooperating teachers were trained to decrease the frequency of type 1 accountability statements and to increase type 3 accountability statements. In order to increase type 3 accountability statements cooperating teachers were trained to decrease statements that described account keeping only, and to increase statements in which all the components of accountability are communicated. The components of accountability are: account keeping, comparison with specification and application of consequence. For example: When an accountability specification was verbalized as "how do you feel about your management time?" it was considered a type 1 accountability statement since only account keeping in the form of verbal questioning was provided. On the other hand, when the accountability specification was verbalized as "your management time decreased from ten percent to five percent of the teaching time, that's a terrific job" it was considered a type 3 accountability statement. The consequence was "that's a terrific job" (verbal praise), and the comparison was made as follows;

"your management time decreased from ten percent to five percent".

For the fourth sub-skill (see figure 1), cooperating teachers were trained to plan or organize the information generated during conferences in a meaningful manner on an Effective Supervision Guide-Physical Education (ESG-PE). An example of a specification on the ESG-PE is shown in Table 1. In order to successfully complete the ESG-PE, cooperating teachers were trained to:

INSERT Table 1

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1) Select teacher or pupil behaviors that need to be remediated or maintained based on baseline data.
2) Specify strategies that can facilitate remediation or maintenance of targeted teacher or pupil behaviors.
3) Establishing criteria for evaluation of performance for each targeted behavior.
4) Determine commencement (start) and completion (end) dates for the specified targeted behaviors.

For the third performance objective (see figure 1), cooperating teachers were trained to apply observation and data recording skills to generate data for making comparisons or for evaluating the student teacher's performance. They were also trained to

Table 1.

An Example of Effective Supervision Guide in Physical Education for Supervisors of Student Teachers.

SUPERVISOR: Tetteh-Ahumah SCHOOL: Accra High Sch. CLASS: 9th grd.

STUDENT TEACHER: Kofi Mensah

BEHAVIOR TO REMEDIATE OR MAINTAIN	STRATEGIES FOR REMEDIATION OR MAINTENANCE	EVALUATION CRITERIA	START DATE	END DATE	COMMENTS
Low rate of activity time	ST.Will: 1. Modify activities to provide opportunity for pupils to engage with content most of the teaching time. 2. Increase # of teams and use the entire space available. 3. Supervise pupils more actively. 4. Show enthusiasm- smile and participate with pupils. 5. Support on-task behavior of pupils. SUP. Will: 1. Monitor teaching. 2. Compare target behavior with specified criteria. 3. Provide feedback in conference. 4. Specify strategies together with student. 5. Apply consequences.	Maintain a weekly average of 40-50% of activity time for 4 consecutive weeks.	10/5	11/6	Immediate improvement over baseline, but occassionally low activity time then stabilizes above the target level. The objective was actually achieved on the 27th of November.

KEY
ST. Student teacher
SUP. Supervisor

apply their observation and data recording skills to generate data that relate to pre-specified behaviors that needed remediation or maintenance.

All the learning units in the training module for the BMS-PE were organized in a systematic manner so that cooperating teachers could follow step-by-step. Feedback was immediate to ensure correct subsequent response. There was a strong emphasis on mastery. In addition, there were opportunities to review learning units until mastery was achieved. A 100% performance criterion was determined sufficient for all the components of the training module except the training component for the Basic ALT-PE (80%). If a cooperating teacher did not achieve criterion the learning unit was repeated until criterion was met.

Data collection and Instrumentation

Data was collected by the cooperating teachers during a ten week student teaching experience at The Ohio State University, Columbus. Each cooperating teacher observed teaching sessions of the student teacher and conducted a five to fifteen minute (maximum) post-teaching conference with the student teacher. Data were collected in each setting twice each week for the same class. The conferences were audiotaped by the cooperating teachers. The post-teaching conference audiotapes were transcribed. The transcripts were then analyzed for specific supervisory behaviors verbalized by cooperating teachers using

the Observational System for Post-Teaching Conference Analysis-Physical Education (OSPTCA-PE) Ocansey (1986).

Based on explicit definitions of supervisory behaviors, this system identified and categorized verbal communications within the post-teaching conferences at three levels, namely: (1) Focus, (2) Explicitness, and (3) Accountability. For the first level of the system, the focus of any interaction within a conference was categorized as: macro-incident category, micro-incident category, planning incident category or unrelated incident category.

For the second level, each task within a conference was classified by it's degree of explicitness as: implicit task or fully explicit task. To determine the degree of explicitness of a task, the number of components present in each task statement was considered. The components included: situation, performance, and criteria.

For the third level, each statement of accountability was categorized as: type 1 accountability statement, or type 3 accountability statement. To determine the type of accountability the number of components of accountability present in the statement was considered. The components of accountability included: account keeping, comparison with specification, and consequence application.

A duration recording timeline was used to categorize the time spent by both conference participants in each focus of the interaction in level one. The duration recording provided information about the percentage of time spent in each interaction category. Also, an event recording technique was used to categorize incidents in the second and third levels of the OSPTCA-PE. The event recording technique provided information about the frequency of occurrence of incidents in each seperate category of task or accountability.

Discussion of reliability of the Observational System for Post-Teaching Conference Analysis (OSPTCA-PE)

The method for calculating reliability of data by category for event and duration recording in the OSPTCA-PE was the scored occurrence method (S-O) (Ocansey 1986). The scored occurrence method allowed for rigorous assessment by category within the OSPTCA-PE instrument. Four reliability checks were made on each subject. That is, two in the baseline condition and two in the intervention condition. Two forms of reliability checks were made on data from audio cassette recordings and data from written transcripts.

Discussion of reliability of data from audio cassette

Prior to analysis of the experimental data, a reliability observer was trained in the use of the OSPTCA-PE until a prespecified criterion was reached. The interobserver agreement

on unambiguous examples presented on the audio cassette tapes was above 80 percent at the end of the training. As indicated by Siedentop (1982) an 80 percent interobserver agreement on observations is considered acceptable minimum level for interobserver agreement.

In order to ensure reliability of the experimental data the following procedures were employed:

1) Audio cassette tapes for reliability checks were selected randomly so that researcher could not manipulate consciously or unconciously which audio cassette tapes were used to check reliability.
2) The researcher was considered an expert coder as he was the one who operationalized the supervisory behaviors. Therefore, it was possible to establish agreement.
3) Revision sessions were scheduled and disagreements were negotiated. This ensured that the researcher and the observer did not drift from the original codes and definitions. All the data were collected on audio cassette tapes so evidences of disagreements were reviewed to establish agreement.
4) Observer and researcher coded identical audio cassette tapes on testing occassions throughout the study.
5) Observer was kept naive of the research questions to ensure that the observer was not biased in coding.

Discussions of reliability of data from written Transcripts

The second reliability check involved the coding of supervisory behaviors from written transcripts. The reliability discussion in this article reflects the reliability checks made by an independent observer based on the transcripts from the conferences. The observer made one reliability check each in baseline and intervention conditions. The same procedures in the first phase were followed to ensure reliability of the results. For the two reliability checks, the range of the mean agreement for level one was 92.3% to 96.3%. For level two, the mean agreement was 90. 3% to 100%. Also for level three the mean agreement was 95.5% to 100%.

Based upon the results of inter-recorder/observer agreement and accuracy of behavior discrimination, the observation system used in this study was considered to have been reliable. Given that 80 percent inter-observer agreement is an acceptable level and the results demonstrate mean percentage figures above the acceptable level, it was assumed that the data reflected what actually happened during the post-teaching conferences.

Visual analysis of graphed data

The data was analyzed using a multiple baseline across subjects design. The discussion of the results for each category at each level of the OSPTCA-PE is guided by a research question. The research question is presented first followed by the results and

discussion. The graphed data for Level One - Focus are presented in Figure 2 below.

INSERT FIGURE. 2

Research Question 1

Does the time spent in the planning incident category within post-teaching conferences (5 to 15 minutes maximum) increase or decrease as a result of implementing a BMS-PE?

Figure 2 indicates that the mean percentage of time spent in the planning incident category during baseline condition for cooperating teacher 1 was 35.2% per conference. Following the implementation of a BMS-PE the mean time spent in planning incident category decreased to 34.9% per conference. For cooperating teacher 2 the time spent in planning incident category increased from 19.8% to 23.7% per. For cooperating teacher 3 the time spent in planning incident category increased from 26.9% to 49.9% per conference. Also, for cooperating teacher 4 the time spent in planning incident category increased from 41.2% to 43.0% per conference.

The results indicate that only cooperating teacher 1, had a decrease in the time spent in planning incident category following intervention. For the other three cooperating teachers the time spent in planning incident category increased. The

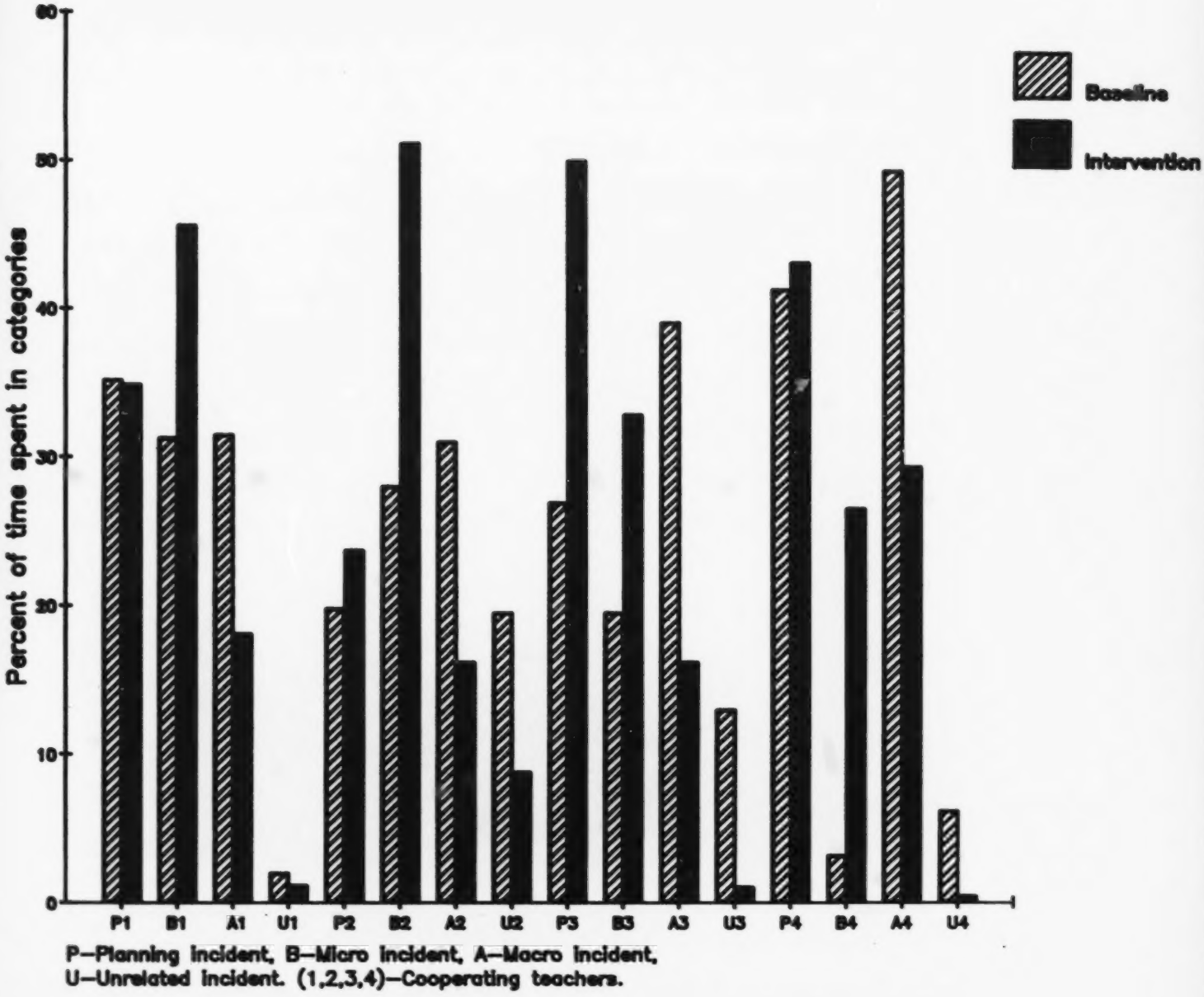

Figure 2. Time spent by cooperating teachers in each focus of interaction.

increased rates of time spent in the planning incident category is consistent with the goals of the teacher education program. That is, to increase the percentage of time spent in planning for the next lesson and also for the next conference session. In terms of this dependent measure, the BMS-PE had a desired impact in facilitating an increase in the time spent in planning incident category for three of the four cooperating teachers.

Research Question 2

Does the time spent in unrelated incident category within post-teaching conferences (5 to 15 minutes maximum) increase or decrease as a result of implementing a BMS-PE?

Figure 2 indicates that the mean percentage of time spent in unrelated incident category decreased following the implementation of a BMS-PE. For cooperating teacher 1 time spent in unrelated incident category decreased marginally from 2.0% to 1.2% per conference. For cooperating teacher 2 the percentage of time spent in unrelated incident category decreased from 19.5% to 8.8% per conference. For cooperating teacher 3 the percentage of time spent in unrelated incident category decreased from 13.0% to 1.1% per conference. Also, for cooperating teacher 4 the percentage of time spent in unrelated incident category decreased from 6.2% to 0.5% per conference.

The results indicate that the percentage of time spent in unrelated incident category decreased following the implementation of a BMS-PE. The low rates of time spent in the unrelated incident category is consistent with the goals of the teacher education program. That is, to reduce the percentage of time spent in discussing incidents that are not based on data generated during teaching sessions by the student teacher. In terms of this dependent measure, the BMS-PE had a desired impact in decreasing the time spent in the unrelated incident category during conferences.

Research Question 3

Does the time spent in micro-incident category within post-teaching conferences (5 to 15 minutes maximum) increase or decrease as a result of implementing a BMS-PE?

Figure 2 indicates that the mean percentage of time spent in micro-incident category increased following implementation of a BMS-PE. For cooperating teacher 1 the percentage of time spent in micro-incident category increased from 31.3% to 45.6% per conference. For cooperating teacher 2 the percentage of time spent in micro-incident category increased from 28.0% to 51.1% per conference. For cooperating teacher 3 the percentage of time spent in micro-incident category increased from 19.5% to 32.8% per conference. Also, for cooperating teacher 4 the percentage

of time spent in micro-incident category increased from 3.2% to 26.5% per conference.

The results indicate that the time spent in micro-incident category within post-teaching conferences increased following the implementation of a BMS-PE. The increased percentage of time spent in the micro-incident category is consistent with the goals of the teacher education program. That is, to increase the percentage of time spent in discussing incidents that relate to teacher and pupil behaviors in conferences. In terms of this dependent measure, the BMS-PE had a desired impact in increasing the time spent in the micro-incident category.

Research Question 4

Does the time spent in macro-incident category within post-teaching conferences (5 to 15 minutes maximum) increase or decrease as a result of implementing a BMS-PE?

Figure 2 indicates that the mean percentage of time spent in macro-incident category decreased following the implementation of a BMS-PE. For cooperating teacher 1 the mean percentage of time decreased from 31.5% to 18.1% per conference. For cooperating teacher 2 the percentage of time spent in macro-incident category decreased from 31.0% to 16.2% per conference. For cooperating teacher 3 the percentage of time spent in macro-incident category decreased from 39.0% to 16.2% per conference. For cooperating teacher 4 the percentage of time

spent in macro-incident category decreased from 49.2% to 29.3% per conference.

The results indicate that the percent of time spent in macro-incident category within post-teaching conferences decreased following the implementation of a BMS-PE. As a goal of the teacher education program is to increase the time spent in discussing specific teacher and pupil behaviors, this decrease in the time spent in in macro-incident category is encouraging.

Research Question 5

Do implicit tasks communicated by cooperating teachers during post-teaching conferences in student teaching decrease as a result of implementing a BMS-PE?

Data for implicit tasks for cooperating teachers are shown in figure 3 and 4. The mean number of implicit tasks verbalized by each cooperating teacher during baseline and intervention are shown in figure 3. For cooperating teacher 1 implicit tasks during baseline was 10.3 per conference. Following implementation of a BMS-PE the level decreased to 1.3 per conference. For cooperating teacher 2 implicit tasks decreased from 9.5 per conference to zero. Cooperating teacher 3 showed a decrease from 15.1 implicit tasks per conference to 3.1 per conference. Cooperating teacher 4 also showed a decrease from 16.3 implicit tasks per conference to 1.0 per conference.

INSERT FIGURE 3 & 4

A visual inspection of figure 4 reveals an immediate decrease in the number of implicit tasks verbalized by cooperating teachers during intervention. Also, figure 4 indicates a variable baseline condition for all the subjects. Following the implementation of the BMS-PE the graph indicates greater stability.

A decreasing trend in figure 4 is evident in the baseline condition for cooperating teacher 1. As Browning (1967), Browning & Stover (1971) and White (1972) noted, it is not always feasible to achieve a stable baseline. During baseline, a slight decreasing trend may be evident. However, the change should be accelerated in order to demonstrate the value of the intervention. A rate of ten implicit tasks per conference was considered as high during the student teaching experience. Based on this criteria the decrease in the last data point for cooperating teacher 1 in the baseline condition was considered high. Therefore it was considered appropriate to introduce the intervention.

The decrease in the number of implicit tasks is consistent with the goals of the student teaching experience. That is, to decrease verbalization of implicit tasks that have a lesser

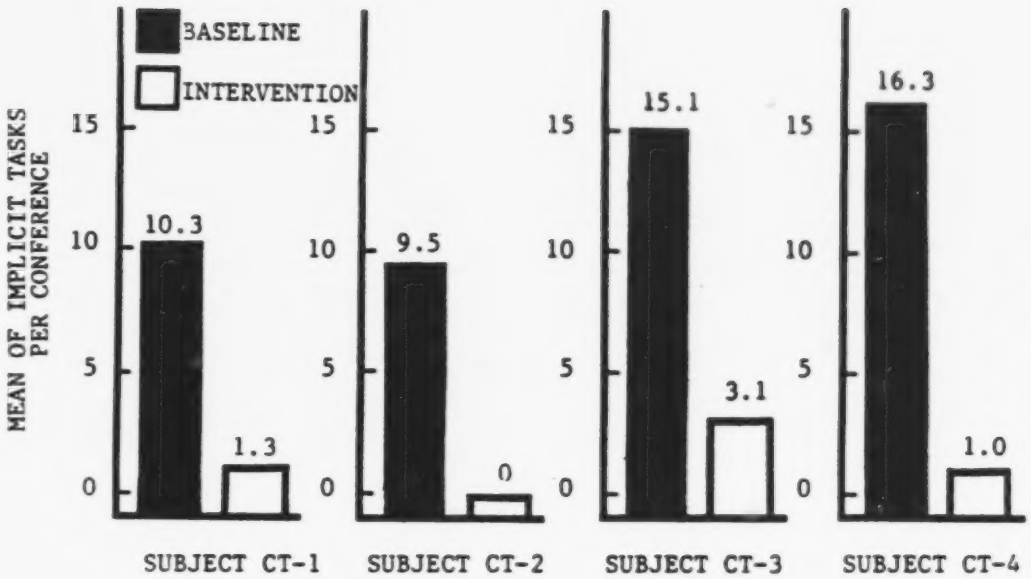

Figure 3: Frequencies of implicit tasks verbalized by cooperating teachers during conferences.

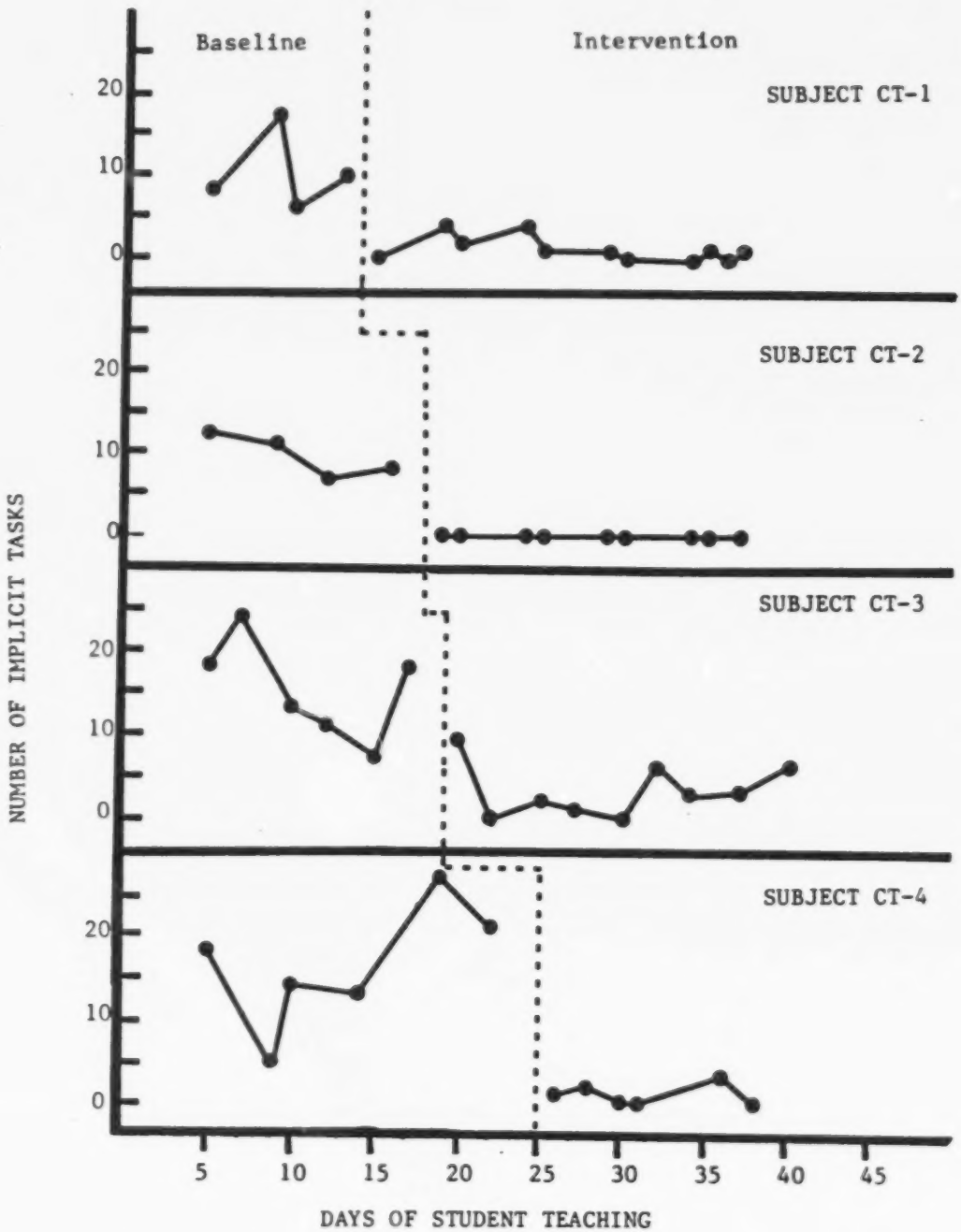

Figure 4: Frequency of implicit tasks verbalized by cooperating teachers (CT.) during baseline and intervention in student teaching conferences.

potential to improve, remediate or maintain appropriate teacher or pupil behaviors in student teaching.

Research Question 6

Do fully explicit tasks communicated by cooperating teachers during post-teaching conferences in student teaching increase as a result of implementing a BMS-PE?

Data for fully explicit tasks are shown in figure 5 and 6. The mean number of fully explicit tasks verbalized by each cooperating teacher are shown in figure 5. Cooperating teacher 1 showed an increase from Ø.3 to 4.6 fully explicit tasks per conference. For cooperating teacher 2 fully explicit tasks during baseline condition was zero. Following the implementation of the BMS-PE the level rose to 3.1 per conference. For cooperating teacher 3 fully explicit tasks increased from Ø.2 to 3.4 per conference. Also, cooperating teacher 4 showed an increase from zero to 7.8 fully explicit tasks per conference.

INSERT FIGURE 5 & 6

A visual inspection of figure 6 reveals a very low and stable baseline for each of the cooperating teachers. There is also an immediate increase in the number of fully explicit tasks verbalized by cooperating teachers in the intervention condition. A decrease in fully explicit tasks is evident on the

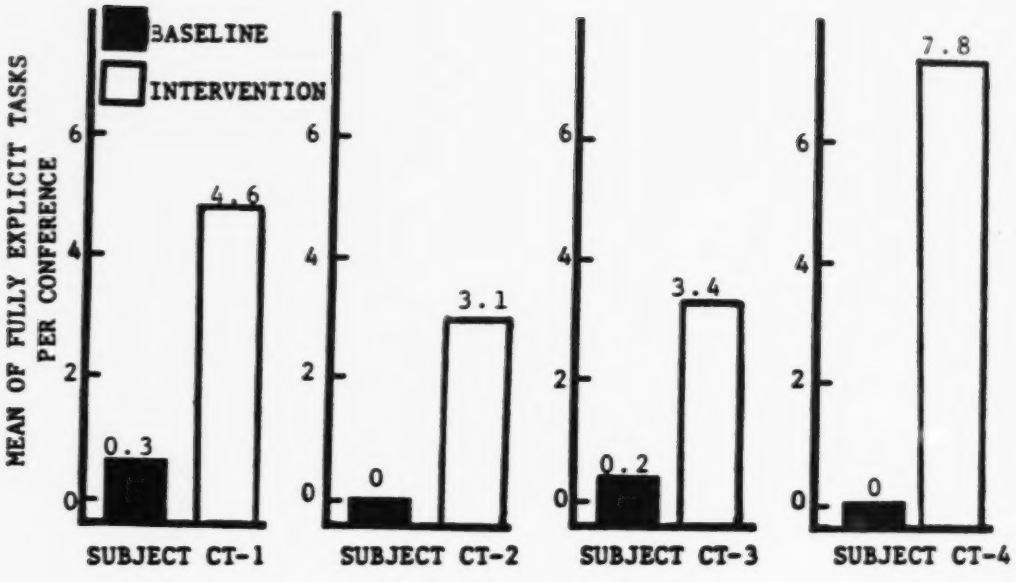

Figure 5: Frequencies of fully explicit tasks verbalized by cooperating teachers during conferences.

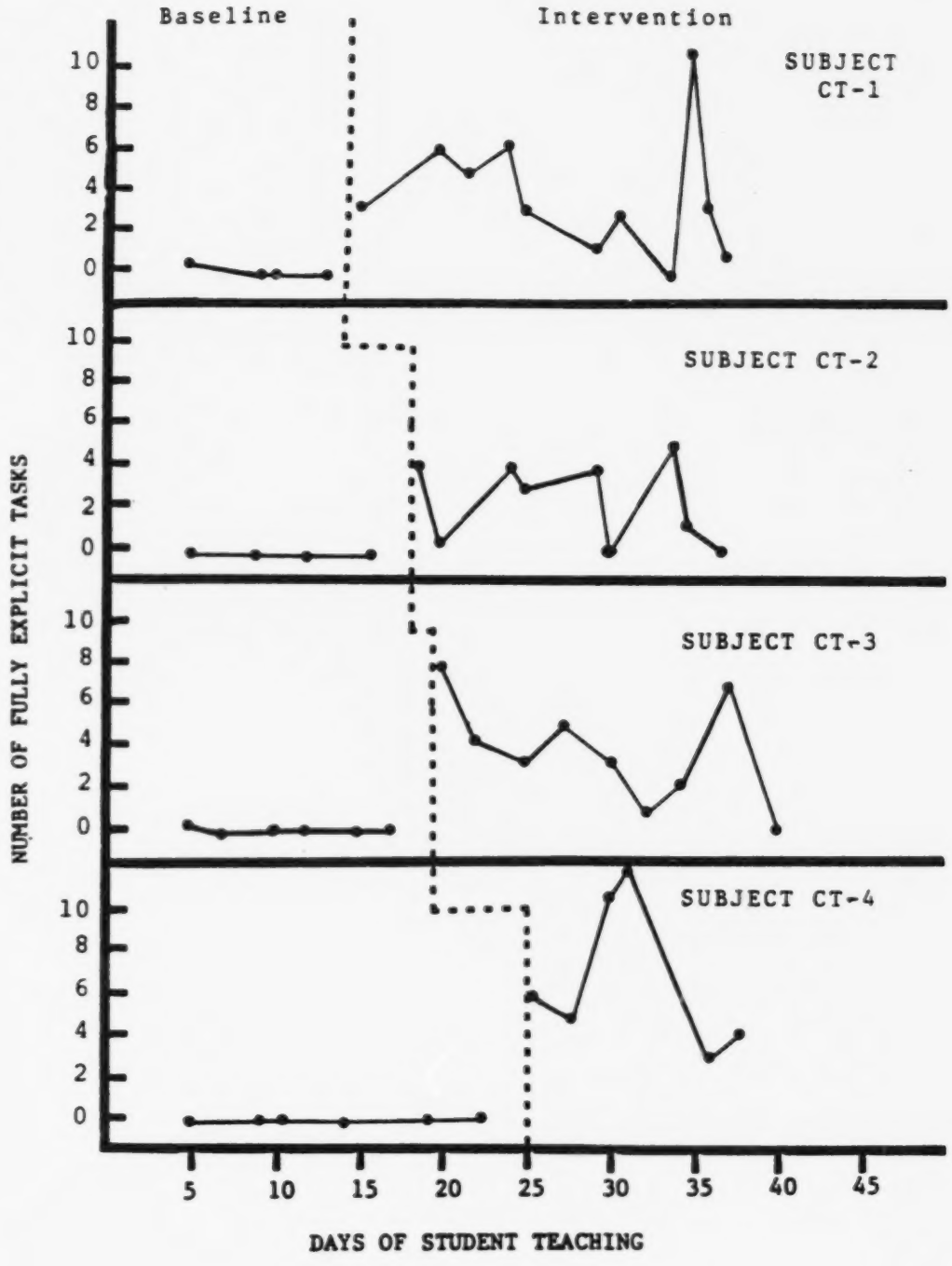

Figure 6: Frequency of fully explicit tasks verbalized by cooperating teachers (CT.) during baseline and intervention in student teaching conferences.

last data point for cooperating teacher 1, cooperating teacher 2, and cooperating teacher 3 in figure 6. The last data points indicate the end of a unit. At the end of the unit when there was no subsequent teaching, task specifications were not relevant. Invariably, there were no further opportunities for observation and conferencing.

The increase in the number of fully explicit tasks is consistent with the goals of the student teaching experience. That is, to facilitate verbalization of explicit tasks that has a greater potential to improve, remediate or maintain teacher or pupils behaviors in student teaching. As Tinning (1983) indicated, if a task is specified in explicit manner, the comparison of student teacher performance with prespecified criteria become a relatively simple process.

Research Question 8

Do incidents of type 1 accountability communicated by cooperating teachers during post-teaching conferences in student teaching decrease as a result of implementing a BMS-PE?

The data for type 1 accountability for are shown in figure 7 and 8. The mean number of type 1 accountability statements verbalized by each cooperating teacher are shown in figure 7. For cooperating teacher 1 type 1 accountability statements during baseline was 7.Ø per conference. Following implementation of the BMS-PE the level decresaed to 6.Ø. For cooperating

teacher 2 type 1 accountability statements decreased from 3.8 to 1.4 per conference. Cooperating teacher 3 showed a decrease from 8.8 type 1 accountability statements per conference to 1.3 per conference. Cooperating teacher 4 also, showed a decrease from 6.5 per conference to 2.3 per conference.

INSERT FIGURE 7 & 8

A visual inspection of figure 8 reveals that the implementation of the BMS-PE effected a decrease in the frequency of type 1 accountability for each cooperating teacher. There is an immediate decrease in the number of type 1 accountability statements verbalized during the intervention condition. A variable baseline condition is also evident for all cooperating teachers. Following the implementation of the BMS-PE the graph showed greater stability.

The decrease in the frequency of type 1 accountability statements is consistent with the goals of the student teaching experience. That is, to decrease verbalization of accountability statements that entailed record keeping only. In terms of this dependent measure, the BMS-PE had a desired impact in decreasing statements of type 1 accountability that has a lesser chance to facilitate the modification or remediation of student teacher or pupil behaviors.

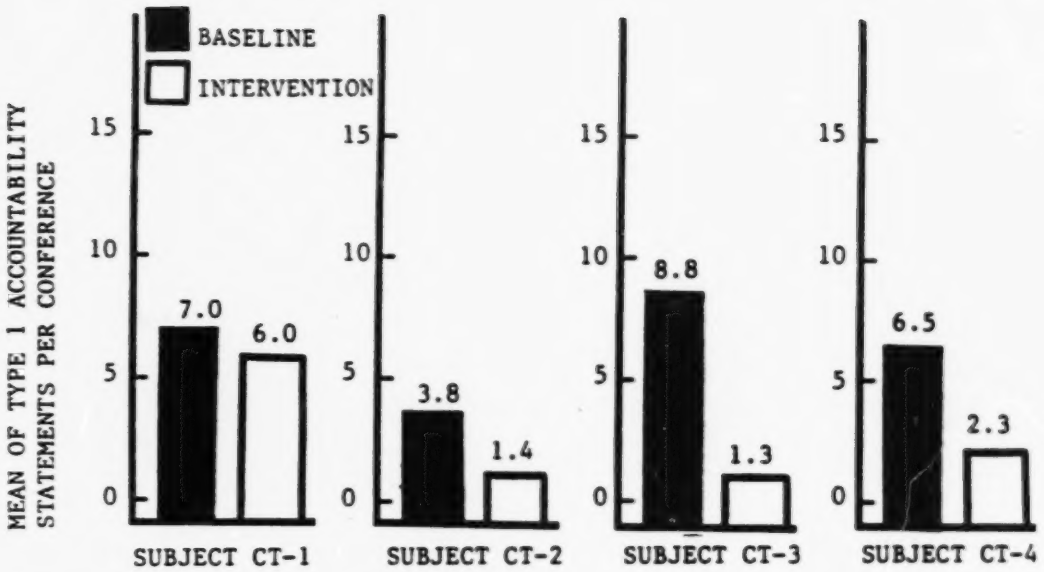

Figure 7: Frequencies of type 1 accountability statements verbalized by cooperating teachers during conferences.

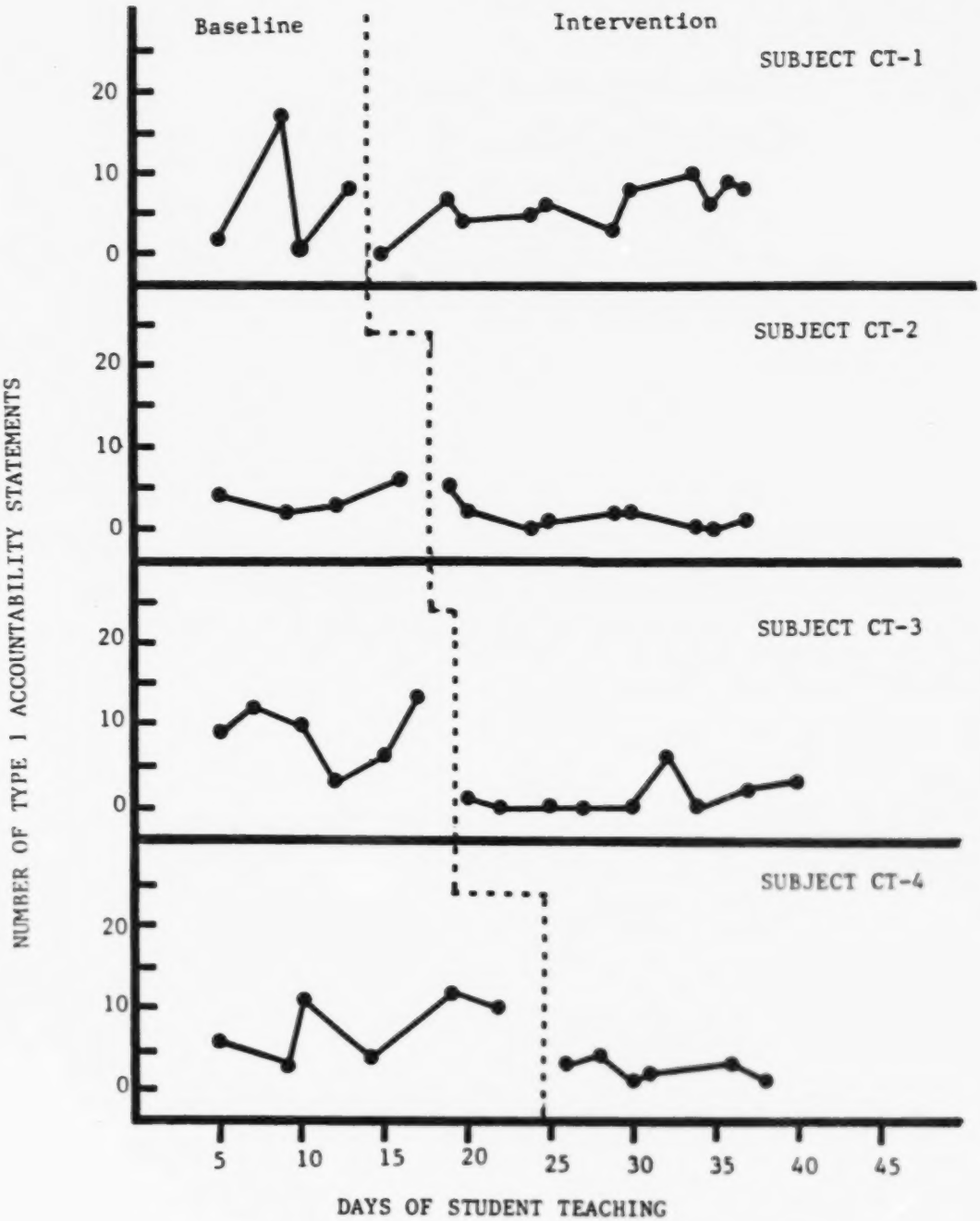

Figure 8: Frequency of type 1 accountability statements verbalized by cooperating teachers (CT.) during baseline and intervention in student teaching conferences.

Research Question 9

Do type 3 accountability statements communicated by cooperating teachers during post-teaching conferences in student teaching increase as a result of implementing a BMS-PE?

Data for type 3 accountability statements are shown in figure 9 and 10. The mean number of type 3 accountability statements verbalized by each cooperating teacher are shown in figure 9. For cooperating teacher 1 the number of type 3 accountability statements in the baseline condition was zero. Following the implementation of a BMS-PE the number of type 3 accountability statements increased to 4.4 per conference. For cooperating teacher 2 the number of type 3 accountability statements increased from zero to 4.8 per conference. Cooperating teacher 3 showed an increase from 1.6 to 3.6 type 3 accountability statements per conference. Also cooperating teacher 4 showed an increase from zero to 2.3 type 3 accountability statements per conference.

INSERT FIGURE 9 & 10

A visual inspection of figure 10 shows an immediate increase in the frequency of type 3 accountability statements in the intervention condition for all cooperating teachers. The graph also shows a very low and stable baseline condition for all cooperating teachers.

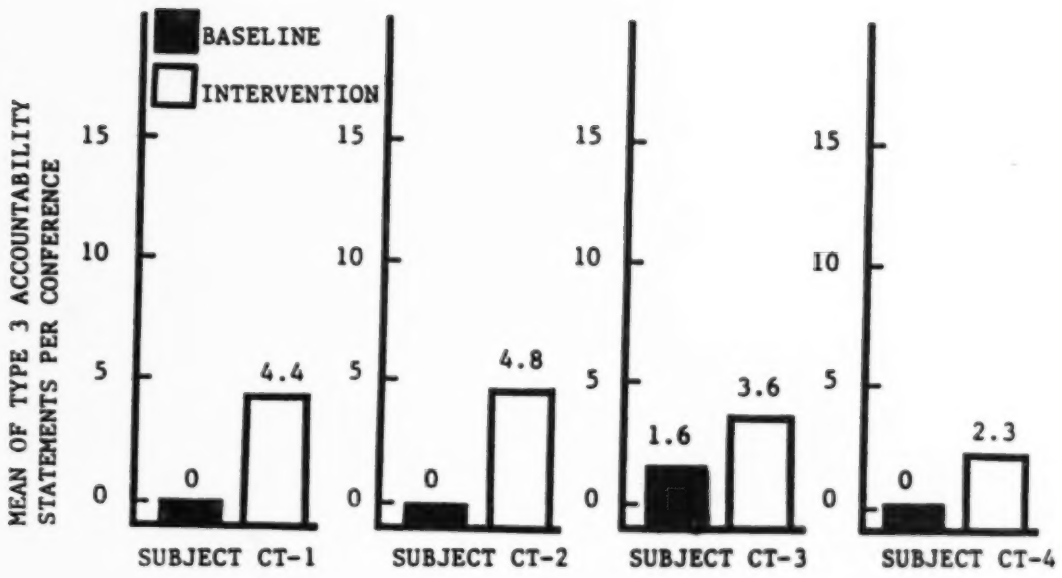

Figure 9: Frequencies of type 3 accountability statements verbalized by cooperating teachers during conferences.

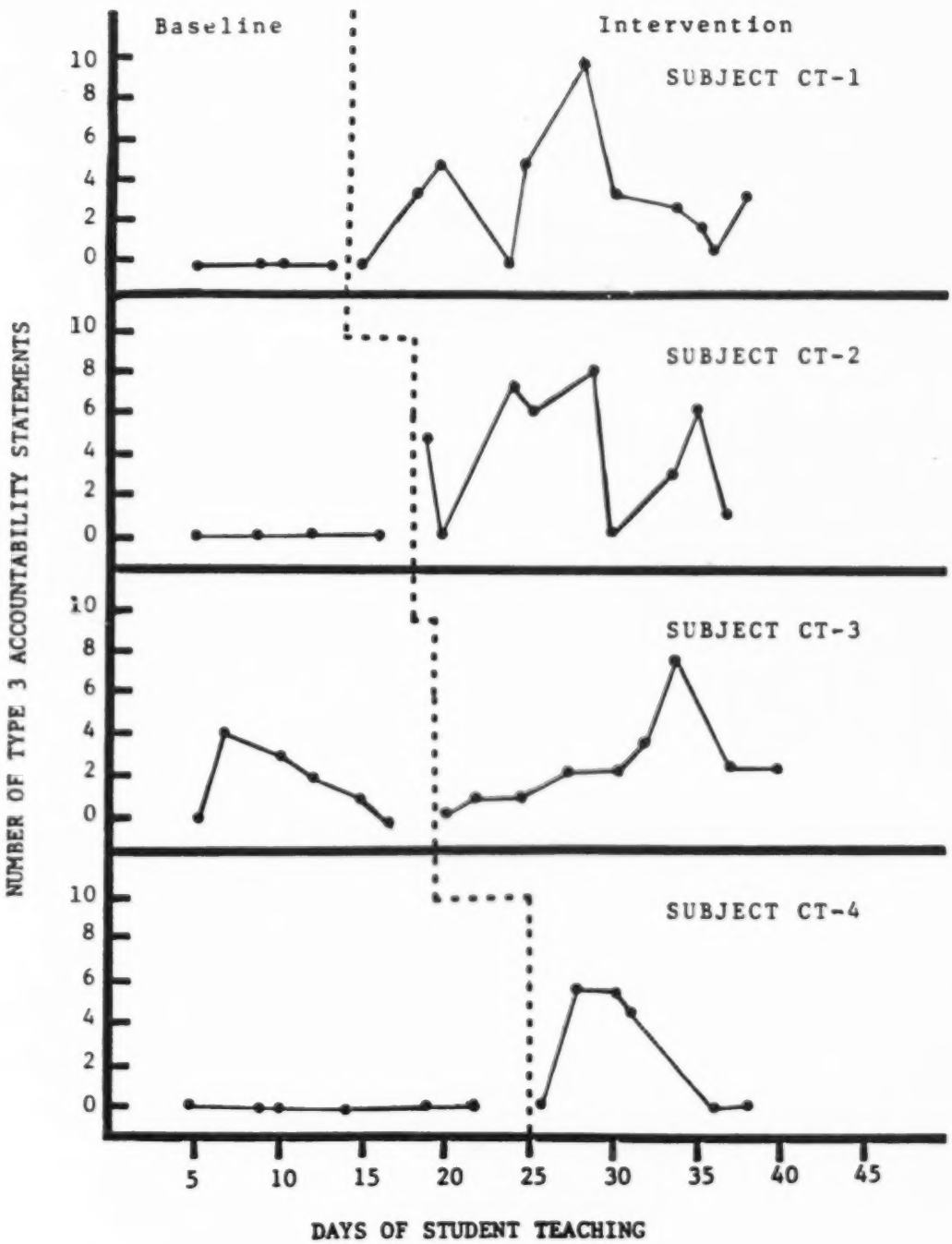

Figure 10: Frequency of type 3 accountability statements verbalized by cooperating teachers (CT.) during baseline and intervention in student teaching conferences.

The results clearly indicate that the focus of the conference cannot be held constant. This is indicated by the variability in the intervention conditions for each cooperating teacher. One factor that may have accounted for the variability in the intervention condition is the stage in the unit being taught. For example, for cooperating teacher 1 the first data points in the intervention condition in figure 6 and 10 marked the beginning of the implementation of the BMS-PE in a unit. Since there were no previous task specifications no type 3 accountability statements were verbalized.

The second data point for cooperating teacher 1 in the intervention condition in figure 10 relfects the data for the second observation session following the implementation of the BMS-PE. The second observation session for cooperating teacher 1 in the intervention condition (see figure 10) is associated with a high frequency of type 3 accountability statements. Also, the first data point in the intervention condition in figure 6 for cooperating teacher 1 indicates that fully explicit specifications were made. The results for the second data points for cooperating teacher 1 (see figure 6 and 10) indicates that for an accountability system to be functional, tasks should be prespecified in fully explicit manner. The increase in the frequency of type 3 accountability statement is consistent with the goals of the student teaching experience. That is, to hold student teachers accountable for their performances through

monitoring, comparison with prespecified criteria and applying desirable consequencies.

General Discussion

The results of this study suggest a number of supervisory behaviors that would seem to have potential for improving the effectiveness of post-teaching conferences during student teaching. If teacher training institutions consider student teaching as a unique aspect of their programs they should train cooperating teachers to facilitate and support the achievement of the goals of the program. The training component of the BMS-PE provides a unique self-instructional package that offers knowledge and practice which is compatible with the goals of the teacher education program.

The results of this study clearly indicate that cooperating teachers can perform supervisory functions as a result of training in a BMS-PE. Training cooperating teachers to be effective supervisors makes a lot of sense, as university supervision in the form of visitation is economically and pedagogically inefficient (Siedentop, 1983). Training cooperating teachers to perform effective supervisory functions can facilitate collaborative efforts, that is, a true partnership in the education of teachers. This partnership in the teacher training process is crucial if teacher education programs are to achieve their goals (Taggart and Wilkinson

1985). Although, as Griffin (1981) suggests, it may be too easy to become a cooperating teacher, this study clearly indicates that cooperating teachers can be trained to perform effective supervisory functions.

This study has been the initial step in a series of similar investigations which could strengthen the case for careful training of supervisors of student teachers in programs that are compatible with the teacher education program goals. It is the investigator's hope that teacher education programs based on research on effective teaching will continue their work in developing the scientific basis of the art of teaching. This study has in some way contributed to this crucial educational endeavor.

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